| Notice of Allowability | Application No. | Applicant(s) | |
|--|--|--|---------------------------|
| | 10/729,081 | SILVERBROOK, KI | Α |
| | Examiner | Art Unit | |
| | Roberts Culbert | 1763 | |
| The MAILING DATE of this communication app All claims being allowable, PROSECUTION ON THE MERITS I herewith (or previously mailed), a Notice of Allowance (PTOL-8: NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT of the Office or upon petition by the applicant. See 37 CFR 1.3 | S (OR REMAINS) CLOSED in 5) or other appropriate common RIGHTS. This application is s | n this application. If not includ unication will be mailed in due | ed course. THIS |
| 1. X This communication is responsive to the application filed | <u>12/8/03</u> . | | |
| 2. X The allowed claim(s) is/are <u>1-7</u> . | | | |
| 3. $igotimes$ The drawings filed on <u>08 December 2003</u> are accepted b | by the Examiner. | | |
| 4. Acknowledgment is made of a claim for foreign priority a) a) All b) Some* c) None of the: 1. Certified copies of the priority documents have 2. Certified copies of the priority documents have 3. Copies of the certified copies of the priority documents have 1. Copies of the certified copies of the priority o | ve been received. ve been received in Application locuments have been received. To of this communication to file IMENT of this application. mitted. Note the attached EXA ves reason(s) why the oath or ust be submitted. rson's Patent Drawing Review — r's Amendment / Comment or 1.84(c)) should be written on the the header according to 37 CF osit of BIOLOGICAL MATE | on No Id in this national stage applicated in this national stage applicated in this national stage applicated in the Complying with the research of the drawings in the front (not the R 1.121(d). | quirements IOTICE OF |
| Attachment(s) 1. ☑ Notice of References Cited (PTO-892) 2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948) 3. ☑ Information Disclosure Statements (PTO-1449 or PTO/SB, Paper No./Mail Date 12/8/03 4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material | 6. ☐ Interview Si Paper No./ /08), 7. ☐ Examiner's | formal Patent Application (PTC ummary (PTO-413), Mail Date Amendment/Comment Statement of Reasons for Allo | ŕ |
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Priority

Acknowledgment is made of applicant's claim for priority under 35 U.S.C. 119(a)-(d). A claim for priority under 35 U.S.C. 119(a)-(d) cannot be based on the submitted foreign applications, since the United States parent application was filed more than twelve months thereafter.

Allowable Subject Matter

Claims 1-7 are allowed.

The following is an examiner's statement of reasons for allowance: The Prior Art of record fails to teach or render obvious a method of fabricating a micro-electromechanical device that includes a wafer, an elongate actuator arm that is anchored to the substrate at a fixed end and is connected to an electrical power supply, the elongate actuator arm having a free end that is displaceable to perform work when an electrical current is applied to the actuator arm and control circuitry that is positioned on the substrate to be interposed between the substrate and the actuator arm and for enabling and disabling the electrical power supply on receipt of a control signal, the method comprising the steps of: carrying out an integrated circuit fabrication process on the wafer to form the control circuitry; depositing sacrificial material on the wafer; etching the sacrificial material to form a deposition zone for a heater layer of a conductive material and contact regions for the heater layer to make electrical contact with the electrical power supply; depositing the heater layer on the etched sacrificial material; etching the heater layer so that the heater layer defines a heating circuit; depositing a layer of a dielectric material on the heater layer; depositing a bend compensator layer of the same material as the heater layer; etching the dielectric and bend compensator layers to define the actuator arm; and etching away the sacrificial material.

The claims of U.S. Patent Application Publication 2004/0094506 A1 to Silverbrook teach a method of fabricating a micro-electromechanical device including fabricating drive circuitry layers, depositing a sacrificial material layer, depositing a heater layer on the sacrificial material layer, etching the heater layer to define heating circuits, depositing a layer of a dielectric material on the heater layer; depositing a bend compensator layer of the same material as the heater layer on the dielectric layer with

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substantially the same deposition characteristics as applied to the heater layer; etching the dielectric layer

to define the actuator; and etching away the sacrificial material.

However, the claims of U.S. Patent Application Publication 2004/0094506 A1 to Silverbrook do

not recite the steps of etching the sacrificial material to form a deposition zone for a heater layer of a

conductive material and contact regions for the heater layer to make electrical contact with the electrical

power supply, depositing the heater layer on the etched sacrificial material, or etching the bend

compensation layer to define the actuator arm.

Any comments considered necessary by applicant must be submitted no later than the payment

of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such

submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should

be directed to Roberts Culbert whose telephone number is (571) 272-1433. The examiner can normally

be reached on Monday-Friday (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,

Gregory Mills can be reached on (571) 272-1439. The fax phone number for the organization where this

application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application

Information Retrieval (PAIR) system. Status information for published applications may be obtained from

either Private PAIR or Public PAIR. Status information for unpublished applications is available through

Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC)

at 866-217-9197 (toll-free).

R. Culbert

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